Chem 11 – 2021-22
FIRST ASSIGNMENT - Substantive Student Activity
Student to complete:

Date submitted:	
Student Name (last name, first name):	
Student home/cell phone:	
Student email (make sure it is legible):	

Student Declaration	REQUIRED for ENROLMENT!
I agree to 1. start my course promptly after enrolling 2. create and follow a structured study routine, 3. establish and maintain a consistent schedule for submitting assignments.	I plan to spend _____ hrs/week on this course on the following days (circle):

M	T	W	Th	F	Sat	Sun

I plan to complete this course by (date):	
Student Signature (required):	

_____ Office use only _____

Date marked:	
Teacher Signature:	
Site (circle one):	DL CE

Please check:

___ Photocopy of assignment (worth 5% of the course) attached.

___ Original returned to student.

___ Scanned to student.

Approved by Principal:	

Posted to Schedule (√):	Post Active Date(√):	Home School Notified (√):	Added to Spreadsheet (√):

About you!	Please tell us a bit about your prior learning and what your goals are for this course.

Last Science Course Taken:	
Did you complete it?	
What was your grade?	
Why are you taking this course (university entrance, graduation etc…)	
What do you hope to get for a grade in this course?	
Math/Science Strengths	
Math/Science Weaknesses	
Learning Concerns:	
Additional Comments:	
Do you have a TUTOR for the course?	
Do you need this course for graduation this year?	

REVIEW ASSIGNMENT

UNIT 1

Basic Skills for Chemistry

Name: _____

Teacher: _____

School: _____

Total _____ = _____%
93

1. Complete the following table (5 marks)

Prefix	Abbreviation	Exponent
giga		
	μ	
		10^6
pico		
	d	
		10^{-9}
milli		
	k	
		10^{-2}

2. Make the following conversions using the Unit Conversion method. Show all of your work and how you manipulate units. Include the correct units in your answer.

a) 4.5×10^5 mm = ? m (2 marks)

b) 0.0038 L = ? μL (2 marks)

c) 7.2 Ms = ?s (2 marks)

d) 0.0075 mm = ? μm (4 marks)

e)5 800 000 dg = ? Mg (4 marks)

f) 0.052 GHz = ? kHz (4 marks)

g) 0.035 mL = ? nL (4 marks)

h)   0.076 g/s = ? g/min (2 marks)

i)   645 µg/L = ? mg/mL (4 marks)

3. Calculate the density, volume or mass for each:

a) Calculate the density of the following liquid: 13.65ml of liquid has a mass of 15.30g .[2 marks]

b) What mass of mercury (density 13.6 g/ml) will occupy a volume of 24.75ml? [2 marks]

c) Calculate the volume, in litres, of a box 2.5 meters long, 13.5 centimetres wide, and 35 millimetres deep. Note: $1L = 1dm^3$ [4 marks]

4. The following are readings from 3 different balances

Balance #1	Balance #2	Balance #3
2.48 g	0.00 g	4.324 g

a) Which is the uncertain digit for each balance reading? Explain your answer

b) Which balance would be the most **precise**? Explain your answer [2 marks]

c) What is meant by accuracy of a measurement? Can we determine accuracy based on the data presented above? [2 marks]

5. The following are three different scales. Determine the correct reading indicated by the arrow. Express your answer to the correct number of significant figures that communicates the precision of the instrument [9 marks].

a)

i)_____ii)_____iii) _____

b)

c)
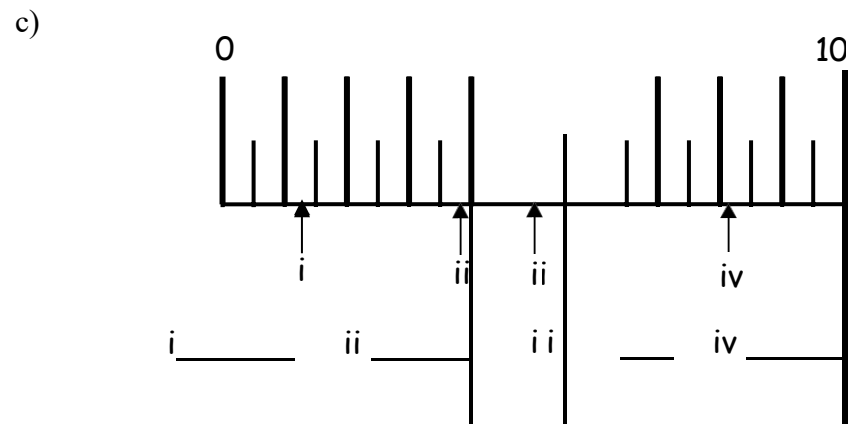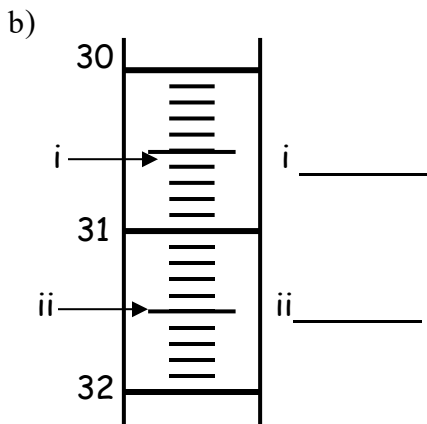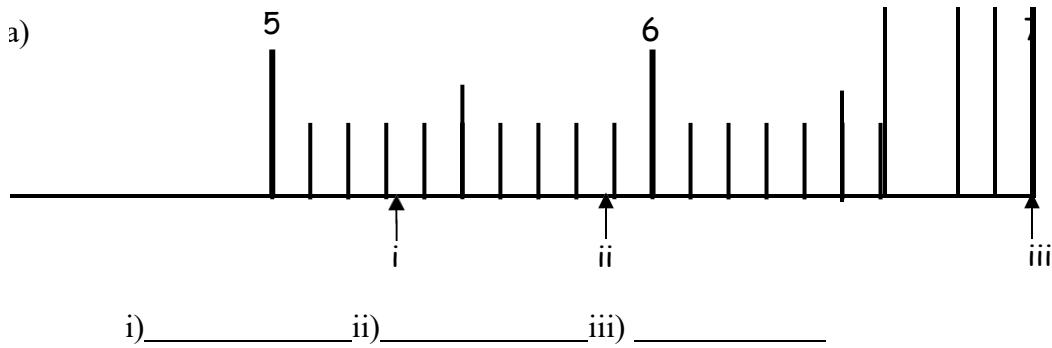
6. Determine the number of **significant digits** in each of the numerical values [4 marks]:

a) 46.002 _____   b) 3.700 x 10^{-3} _____   c) 0.000005 _____   d) 7 000 _____

7. Express each of the following numbers to **2 significant digits** (figures) [12 marks]:

a) 45 770 _____   b) 0.000 064 78 _____   c) 8 000 000 _____

d) 33.0964_____e) 5.76229 x 10^4_____f) 6 _____

8. Perform the following calculations and express the answer in the correct number of significant digits or decimal places as justified by the data [21 marks].

a) 5.4597 x 0.0112 =_____   b) 2.700 / 0.700 = _____

c) 2.6 + 0.5573 =_____   d) 6.2697 – 0.511 = _____

e) 2.78 + 3.229 =_____   f) 5.3 x 10^{-7} x 9.22298 =_____

g) 3.6437 x 10^{-4} + 9.2103 x 10^{-7} = _____

h) 5.2468 x 0.923 + 3.00210 x 1.9999 = _____

i) (6.210 + 0.92) (3.75411 + 1.32410) =

j) $\dfrac{(222.115 - 4.56892)}{(32.98 - 25.22316)}$ = _____

_____   _____